

SEQUENCE LISTING

<110> McWhirter, John
 <120> CELL SURFACE PROTEIN ASSOCIATED WITH HUMAN CHRONIC LYMPHOCYTIC
 LEUKEMIA
 <130> 107 PCT (1087-86 PCT)
 <140> PCT/US2004/017118
 <141> 2004-06-02
 <150> US 60/530,094
 <151> 2003-12-15
 <150> US 60/475,156
 <151> 2003-06-02
 <160> 86
 <170> PatentIn version 3.2
 <210> 1
 <211> 183
 <212> PRT
 <213> human
 <400> 1

Met Gln Ala Pro Arg Ala Ala Leu Val Phe Ala Leu Val Ile Ala Leu
 1 5 10 15

Val Pro Val Gly Arg Gly Asn Tyr Glu Glu Leu Glu Asn Ser Gly Asp
 20 25 30

Thr Thr Val Glu Ser Glu Arg Pro Asn Lys Val Thr Ile Pro Ser Thr
 35 40 45

Phe Ala Ala Val Thr Ile Lys Glu Thr Leu Asn Ala Asn Ile Asn Ser
 50 55 60

Thr Asn Phe Ala Pro Asp Glu Asn Gln Leu Glu Phe Ile Leu Met Val
 65 70 75 80

Leu Ile Pro Leu Ile Leu Leu Val Leu Leu Leu Leu Ser Val Val Phe
 85 90 95

Leu Ala Thr Tyr Tyr Lys Arg Lys Arg Thr Lys Gln Glu Pro Ser Ser
 100 105 110

Gln Gly Ser Gln Ser Ala Leu Gln Thr Tyr Glu Leu Gly Ser Glu Asn
 115 120 125

Val Lys Val Pro Ile Phe Glu Glu Asp Thr Pro Ser Val Met Glu Ile

130

135

140

Glu Met Glu Glu Leu Asp Lys Trp Met Asn Ser Met Asn Arg Asn Ala
 145 150 155 160

Asp Phe Glu Cys Leu Pro Thr Leu Lys Glu Glu Lys Glu Ser Asn His
 165 170 175

Asn Pro Ser Asp Ser Glu Ser
 180

<210> 2
 <211> 675
 <212> DNA
 <213> human

<400> 2
 aagcttagcc cggcgagca tcctgagcgc gcctctgccg aggcgagcgg acatgcaggc 60
 tccccgcgca gccctagtct tcgccctggt gatcgcgctc gttcccgtcg gccggggtaa 120
 ttatgaggaa ttagaaaact caggagatac aactgtggaa tctgaaagac caaataaagt 180
 gactattcca agcacatttg ctgcagtgcac catcaaagaa acattaaatg caaatataaa 240
 ttctaccaac tttgctccgg atgaaaatca gttagagttt atactgatgg tgttaatccc 300
 attgatttta ttggtcctct tacttttatac cgtgggtattc cttgcaacat actataaaag 360
 aaaaagaact aacaagaacc ttctagccaa ggatctcaga gtgctttaca gacatatgaa 420
 ctgggaagtg aaaacgtgaa agtccttatt tttgaggaag atacaccctc tgttatggaa 480
 attgaaatgg aagagcttga taaatggatg aacagcatga atagaaatgc cgactttgaa 540
 tgtttaccta cttgaagga agagaaggaa tcaaatcaca acccaagtga cagtgaatcc 600
 taaacctgaa tggcgctcat gttttccaag agaagcagcc cctgagggag tctgctgagg 660
 ctgccaacag gatcc 675

<210> 3
 <211> 181
 <212> PRT
 <213> murine

<400> 3

Met Thr Val Pro Cys Ala Ala Leu Val Leu Ala Leu Gly Leu Ala Phe
 1 5 10 15

Gly Gln Ser Ser Gln Gly Asn Asp Glu Glu Ser Glu Tyr Ser Gly Gln
 20 25 30

Ser Ile Thr Glu Glu Glu Asn Ser Glu Asp Glu Thr Thr Arg Ser Ala

35 40 45
 Leu Ala Thr Val Thr Thr Glu Ala Leu Ala Glu Asn Val Asn Ser Thr
 50 55 60
 His Thr Asn Asp Thr Ser Asn Gln Val Glu Phe Ile Leu Met Val Ala
 65 70 75 80
 Ile Pro Leu Ala Ala Leu Leu Ile Leu Leu Phe Met Val Leu Ile Ala
 85 90 95
 Thr Tyr Phe Lys Ser Lys Arg Pro Lys Gln Glu Pro Ser Ser Gln Gly
 100 105 110
 Ser Gln Ser Ala Leu Gln Thr His Glu Leu Gly Gly Glu Thr Leu Lys
 115 120 125
 Val Pro Ile Phe Glu Glu Asp Thr Pro Ser Val Met Glu Ile Glu Met
 130 135 140
 Glu Glu Leu Asp Lys Trp Met Asn Ser Met Asn Arg Asn Ala Asp Tyr
 145 150 155 160
 Glu Cys Leu Pro Thr Leu Lys Glu Glu Lys Glu Pro Asn Pro Ser Pro
 165 170 175
 Ser Asp Asn Glu Ser
 180

 <210> 4
 <211> 367
 <212> PRT
 <213> rat

 <400> 4
 Met Thr Arg Pro Pro Tyr Gln Glu Ala Pro Val Gly Asp Leu Gln Met
 1 5 10 15
 Gly Asp Arg Gln Glu Ser Ser Gly Asp Lys Asp Arg Asn Asp Glu Asp
 20 25 30
 Ser Glu Tyr Ser Gly His Ser Thr Thr Glu Glu Asp Thr Ala Glu Glu
 35 40 45
 Glu Thr Thr Arg Ala Leu Ala Thr Val Thr Thr Glu Ala Leu Ala Glu
 50 55 60

Ser Ala Asn Ser Thr His Ile His Gly Thr Ser Asn Gln Val Glu Phe
 65 70 75 80

Ile Leu Met Val Ala Val Pro Leu Ala Ala Leu Leu Ile Leu Leu Phe
 85 90 95

Ala Ile Leu Ile Val Ile Tyr Phe Lys Ser Arg Arg Pro Lys Gln Glu
 100 105 110

Pro Ser Ser Gln Gly Ser Gln Ser Ala Leu Gln Thr Leu Arg Leu Leu
 115 120 125

Leu Ser Leu Glu Thr Lys Arg Pro Glu Pro Ser Val Ala Pro Ser Leu
 130 135 140

Gly Pro Arg Pro Thr Ile Pro Leu Pro Thr Ala Gln Arg Gly Pro Cys
 145 150 155 160

Gln Gln Ser Gly Cys Lys Ala Gly Thr Lys Gly Gly Arg Gln Asp Arg
 165 170 175

Gly Glu Asn Glu Met Ala Gly Arg Lys Gly Thr Lys Trp Lys Pro Val
 180 185 190

Gly Asn Gly Pro Gly Ala Glu Lys Met Arg Pro Gln Lys Ala Phe Cys
 195 200 205

Ser Phe Asn Ala Asp Tyr Gly Ala Ser His Ser Val His Leu Glu His
 210 215 220

Phe Gly Asn Gly Phe Leu Asn Phe Ser Ile Ile Cys Met Gln Val Gly
 225 230 235 240

Phe Cys Pro Pro Pro Ser Leu Trp Gly Ala Gln Met Arg Val Glu Ile
 245 250 255

Arg Ala His Ser Gly Thr Val Glu Pro Leu Ala Val Trp Glu Ile Gly
 260 265 270

Gly Glu Val Ala Lys Gln Gly Lys Gly Thr Asp Asp Leu Gly Gly Glu
 275 280 285

Thr Leu Lys Val Pro Ile Phe Glu Glu Asp Thr Pro Ser Val Met Glu
 290 295 300

Ile Glu Met Glu Glu Leu Asp Lys Trp Met Asn Ser Met Asn Arg Asn
 305 310 315 320

Gly Thr Trp Lys Thr Lys Ala Phe Ala Cys Leu Cys Gly Asn Ala Gly
 325 330 335

Leu Asp Gly Cys Leu Cys Phe Ile Ser Asn Ser Glu Asn Leu Lys Leu
 340 345 350

Cys Phe Ile Trp His Ser Thr Cys Ala Leu Leu Lys Asp Pro Val
 355 360 365

<210> 5
 <211> 703
 <212> DNA
 <213> artificial sequence

<220>
 <223> FLJ32028 with an HA epitope tag

<400> 5
 aagcttagcc cggcgagcga tcctgagcgc gcctctgccg aggcgagcgg acatgcaggc 60
 tccccgcgca gccctagtct tcgccctggg gatcgcgctc gttcccgtcg gccggggtaa 120
 ttatccatat gatgttccag attatgctta tgaggaatta gaaaactcag gagatacaac 180
 tgtggaatct gaaagaccaa ataaagtgac tattccaagc acatttgctg cagtgaccat 240
 caaagaaaca ttaaattgcaa atataaattc taccaacttt gctccggatg aaaatcagtt 300
 agagtttata ctgatgggtg taatccatt gattttattg gtcctcttac ttttatccgt 360
 ggtattcctt gcaacatact ataaaagaaa aagaactaaa caagaacctt ctagccaagg 420
 atctcagagt gctttacaga catatgaact ggggaagtga aacgtgaaag tccctatttt 480
 tgaggaagat acaccctctg ttatggaaat tgaaatggaa gagcttgata aatggatgaa 540
 cagcatgaat agaaatgccg actttgaatg ttacctacc ttgaaggaag agaaggaatc 600
 aaatcacaac ccaagtgaca gtgaatccta aacctgaatg gcgctcatgt tttccaagag 660
 aagcagcccc tgagggagtc tgctgaggct gccaacagga tcc 703

<210> 6
 <211> 192
 <212> PRT
 <213> artificial sequence

<220>
 <223> FLJ32028 with HA epitope tag

<400> 6

Met Gln Ala Pro Arg Ala Ala Leu Val Phe Ala Leu Val Ile Ala Leu
 1 5 10 15

Val Pro Val Gly Arg Gly Asn Tyr Pro Tyr Asp Val Pro Asp Tyr Ala
20 25 30

Tyr Glu Glu Leu Glu Asn Ser Gly Asp Thr Thr Val Glu Ser Glu Arg
35 40 45

Pro Asn Lys Val Thr Ile Pro Ser Thr Phe Ala Ala Val Thr Ile Lys
50 55 60

Glu Thr Leu Asn Ala Asn Ile Asn Ser Thr Asn Phe Ala Pro Asp Glu
65 70 75 80

Asn Gln Leu Glu Phe Ile Leu Met Val Leu Ile Pro Leu Ile Leu Leu
85 90 95

Val Leu Leu Leu Leu Ser Val Val Phe Leu Ala Thr Tyr Tyr Lys Arg
100 105 110

Lys Arg Thr Lys Gln Glu Pro Ser Ser Gln Gly Ser Gln Ser Ala Leu
115 120 125

Gln Thr Tyr Glu Leu Gly Ser Glu Asn Val Lys Val Pro Ile Phe Glu
130 135 140

Glu Asp Thr Pro Ser Val Met Glu Ile Glu Met Glu Glu Leu Asp Lys
145 150 155 160

Trp Met Asn Ser Met Asn Arg Asn Ala Asp Phe Glu Cys Leu Pro Thr
165 170 175

Leu Lys Glu Glu Lys Glu Ser Asn His Asn Pro Ser Asp Ser Glu Ser
180 185 190

<210> 7
<211> 637
<212> DNA
<213> artificial sequence

<220>
<223> FLJ32028 with HA epitope tag

<400> 7
aagcttagcc cggcgcagca tcttgagcgc gcctctgccg aggcgagcgg acatgcaggc 60
tccccgcgca gccctagtct tcgccttggg gatcgcgctc gttcccgtcg gccggggtaa 120
ttatgaggaa ttagaaaact caggagatac aactgtggaa tctgaaagac caaataaagt 180
gactattcca agcacatttg ctgcagtgac catcaaagaa acattaaatg caaatataaa 240
ttctaccaac tttgctccgg atgaaaatca gttagagttt atactgatgg tgttaatccc 300

```

attgatttta ttggctctct tactttttatc cgtggtattc cttgcaacat actataaaaag 360
aaaaagaact aaacaagaac cttctagcca aggatctcag agtgctttac agacatatga 420
actgggaagt gaaaacgtga aagtccttat ttttgaggaa gatacacccct ctgttatgga 480
aattgaaatg gaagagcttg ataaatggat gaacagcatg aatagaaatg ccgactttga 540
atgtttacct accttgaagg aagagaagga atcaaatac aaccaagt acagtgaatc 600
ctatccatat gatgttcag attatgctta aggatcc 637

```

```

<210> 8
<211> 192
<212> PRT
<213> artificial sequence

<220>
<223> FLJ32028 with HA epitope tag

<400> 8

```

```

Met Gln Ala Pro Arg Ala Ala Leu Val Phe Ala Leu Val Ile Ala Leu
1          5          10          15

```

```

Val Pro Val Gly Arg Gly Asn Tyr Glu Glu Leu Glu Asn Ser Gly Asp
          20          25          30

```

```

Thr Thr Val Glu Ser Glu Arg Pro Asn Lys Val Thr Ile Pro Ser Thr
          35          40          45

```

```

Phe Ala Ala Val Thr Ile Lys Glu Thr Leu Asn Ala Asn Ile Asn Ser
          50          55          60

```

```

Thr Asn Phe Ala Pro Asp Glu Asn Gln Leu Glu Phe Ile Leu Met Val
65          70          75          80

```

```

Leu Ile Pro Leu Ile Leu Leu Val Leu Leu Leu Leu Ser Val Val Phe
          85          90          95

```

```

Leu Ala Thr Tyr Tyr Lys Arg Lys Arg Thr Lys Gln Glu Pro Ser Ser
          100          105          110

```

```

Gln Gly Ser Gln Ser Ala Leu Gln Thr Tyr Glu Leu Gly Ser Glu Asn
          115          120          125

```

```

Val Lys Val Pro Ile Phe Glu Glu Asp Thr Pro Ser Val Met Glu Ile
          130          135          140

```

```

Glu Met Glu Glu Leu Asp Lys Trp Met Asn Ser Met Asn Arg Asn Ala
145          150          155          160

```

Asp Phe Glu Cys Leu Pro Thr Leu Lys Glu Glu Lys Glu Ser Asn His
165 170 175

Asn Pro Ser Asp Ser Glu Ser Tyr Pro Tyr Asp Val Pro Asp Tyr Ala
180 185 190

<210> 9
<211> 1421
<212> DNA
<213> murine

<220>
<221> misc_feature
<222> (40)..(40)
<223> n = degenefacy in code

<400> 9
atgttttgat gacccaaact ccactctccc tgcctgtccn ttttggagat caagcctcca 60
tctcttgtag atctagtcag agcattgtac atagtaatgg aaacacctat ttagaatggg 120
acctgcagaa accaggccag tctccaaagc tctgatcta caaagtctcc aaccgatttt 180
ctgggggtccc agacagggtc agtggcagtg gatcaggggac agatttcaca ctcaagatca 240
gcagagtggg ggctgaggat ctgggagttt attactgctt tcaagggtca catgttccgc 300
tcacgttcgg tgctgggacc aagctggagc tgaaacgggc tgatgctgca ccaactgtat 360
ccatcttccc accatccagt gagcagttaa catccggagg tgcctcagtc gtgtgcttct 420
tgaacaactt ctaccccaaa gacatcaatg tcaagtggaa gattgatggc agtgaacgac 480
aaaatggcgt cctgaacagt tggactgatc aggacagcaa agacagcacc tacagcatga 540
gcagcaccct cacgttgacc aaggacgagt atgaacgaca taacagctat acctgtgagg 600
ccactcaca gacatcaact tcaccattg tcaagagctt caacaggaat gagtgttaag 660
cggccgcact agatataatt aaggagataa atatgaaata tctgctgccg accgcggcgg 720
cgggcctgct gctgctggcg gcgcagccgg cgatggcgct cgaggtgaag ctggtggagt 780
ctggggggagg cttagtgaag cctggagggt ccctgaaact ctctgtgca gcctctggat 840
tcactttcag tgactatgcc atgtcttggg ttcgccagac tccagagaag aggctggagt 900
gggtcgcata aattagtagt ggtggtacca cctattatct agacagtgtg aagggccgat 960
tcaccatctc cagagataat gccaggaaca tctgtacct gcaaatagagc agtctgaggt 1020
ctgaggacac ggccatgtat tattgtgtaa gaagtgaac gaactactgg ggccaaggca 1080
ccactctcac agtctctca gccaaaacga ccccccatc tgtctatcca ctggccctg 1140
gatctgctgc ccaaactaac tccatgataa ccctaggctg cctggtcaag gactacttcc 1200

ccgaaccggt gacggtgtcg tggaactcag gcgctctgac cagcggcgtg cacaccttcc 1260
 cggctgtcct acagtcctca ggactctact ccctcagcag cgtggtgacc gtgccatcca 1320
 gcagcttggg caccagacc tacatctgca acgtgaatca caagcccagc aacaccaagg 1380
 tggacaagaa agttgagccc aaatcttgtg acaaaactag t 1421

<210> 10
 <211> 474
 <212> PRT
 <213> murine

<220>
 <221> MISC_FEATURE
 <222> (14)..(14)
 <223> Xaa = any amino acid

<220>
 <221> MISC_FEATURE
 <222> (220)..(220)
 <223> Xaa = any amino acid

<400> 10

Tyr Val Leu Met Thr Gln Thr Pro Leu Ser Leu Pro Val Xaa Phe Gly
 1 5 10 15

Asp Gln Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Ile Val His Ser
 20 25 30

Asn Gly Asn Thr Tyr Leu Glu Trp Tyr Leu Gln Lys Pro Gly Gln Ser
 35 40 45

Pro Lys Leu Leu Ile Tyr Lys Val Ser Asn Arg Phe Ser Gly Val Pro
 50 55 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
 65 70 75 80

Ser Arg Val Glu Ala Glu Asp Leu Gly Val Tyr Tyr Cys Phe Gln Gly
 85 90 95

Ser His Val Pro Leu Thr Phe Gly Ala Gly Thr Lys Leu Glu Leu Lys
 100 105 110

Arg Ala Asp Ala Ala Pro Thr Val Ser Ile Phe Pro Pro Ser Ser Glu
 115 120 125

Gln Leu Thr Ser Gly Gly Ala Ser Val Val Cys Phe Leu Asn Asn Phe
 130 135 140

Tyr Pro Lys Asp Ile Asn Val Lys Trp Lys Ile Asp Gly Ser Glu Arg
 145 150 155 160

Gln Asn Gly Val Leu Asn Ser Trp Thr Asp Gln Asp Ser Lys Asp Ser
 165 170 175

Thr Tyr Ser Met Ser Ser Thr Leu Thr Leu Thr Lys Asp Glu Tyr Glu
 180 185 190

Arg His Asn Ser Tyr Thr Cys Glu Ala Thr His Lys Thr Ser Thr Ser
 195 200 205

Pro Ile Val Lys Ser Phe Asn Arg Asn Glu Cys Xaa Ala Ala Ala Leu
 210 215 220

Asp Ile Ile Lys Glu Ile Asn Met Lys Tyr Leu Leu Pro Thr Ala Ala
 225 230 235 240

Ala Gly Leu Leu Leu Leu Ala Ala Gln Pro Ala Met Ala Leu Glu Val
 245 250 255

Lys Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly Ser Leu
 260 265 270

Lys Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Asp Tyr Ala Met
 275 280 285

Ser Trp Val Arg Gln Thr Pro Glu Lys Arg Leu Glu Trp Val Ala Ser
 290 295 300

Ile Ser Ser Gly Gly Thr Thr Tyr Tyr Leu Asp Ser Val Lys Gly Arg
 305 310 315 320

Phe Thr Ile Ser Arg Asp Asn Ala Arg Asn Ile Leu Tyr Leu Gln Met
 325 330 335

Ser Ser Leu Arg Ser Glu Asp Thr Ala Met Tyr Tyr Cys Val Arg Ser
 340 345 350

Glu Thr Asn Tyr Trp Gly Gln Gly Thr Thr Leu Thr Val Ser Ser Ala
 355 360 365

Lys Thr Thr Pro Pro Ser Val Tyr Pro Leu Ala Pro Gly Ser Ala Ala
 370 375 380

Gln Thr Asn Ser Met Ile Thr Leu Gly Cys Leu Val Lys Asp Tyr Phe

385					390						395					400
Pro	Glu	Pro	Val	Thr 405	Val	Ser	Trp	Asn	Ser 410	Gly	Ala	Leu	Thr	Ser 415	Gly	
Val	His	Thr	Phe 420	Pro	Ala	Val	Leu	Gln 425	Ser	Ser	Gly	Leu	Tyr 430	Ser	Leu	
Ser	Ser	Val 435	Val	Thr	Val	Pro	Ser 440	Ser	Ser	Leu	Gly	Thr 445	Gln	Thr	Tyr	
Ile	Cys 450	Asn	Val	Asn	His	Lys 455	Pro	Ser	Asn	Thr	Lys 460	Val	Asp	Lys	Lys	
Val 465	Glu	Pro	Lys	Ser	Cys 470	Asp	Lys	Thr	Ser							

tgacatctga ggactctgcc gtctattact gtacggctgg tgtttattgg ggccaaggga 1080
 ctctgggtcac tgtctctgca gccaaaacaa cagccccatc ggtctatcca ctggcccctg 1140
 tgtgtggaga tacaactggc tcctcgatga ccctaggctg cctgggtcaag gactacttcc 1200
 ccgaaccggg gacgggtgtcg tggaactcag gcgctctgac cagcggcgtg cacaccttcc 1260
 cggctgtcct acagtctca ggactctact ccctcagcag cgtgggtgacc gtgccatcca 1320
 gcagcttggg caccagacc tacatctgca acgtgaatca caagcccagc aacaccaagg 1380
 tggacaagaa agttgagccc aaatcttgtg acaaaaactag t 1421

<210> 12
 <211> 472
 <212> PRT
 <213> murine

<400> 12

Thr Leu Trp Met Thr Gln Ala Glu Leu Ser Ser Pro Val Thr Ser Gly
 1 5 10 15

Glu Ser Val Ser Ile Ser Cys Arg Ser Ser Lys Ser Leu Leu Tyr Lys
 20 25 30

Asp Gly Lys Thr Tyr Leu Asn Trp Tyr Leu Gln Arg Pro Gly Gln Ser
 35 40 45

Pro Gln Leu Leu Ile Tyr Phe Met Ser Thr Arg Ala Pro Gly Val Ser
 50 55 60

Asp Arg Phe Ser Gly Ile Gly Ser Gly Thr Asp Phe Ile Leu Glu Ile
 65 70 75 80

Ser Arg Val Lys Ala Glu Asp Val Gly Val Tyr Tyr Cys Gln Gln Leu
 85 90 95

Val Glu Tyr Pro Leu Thr Phe Gly Ala Gly Thr Lys Leu Glu Leu Lys
 100 105 110

Arg Ala Asp Ala Ala Pro Thr Val Ser Ile Phe Pro Pro Ser Ser Glu
 115 120 125

Gln Leu Thr Ser Gly Gly Ala Ser Val Val Cys Phe Leu Asn Asn Phe
 130 135 140

Tyr Pro Lys Asp Ile Asn Val Lys Trp Lys Ile Asp Gly Ser Glu Arg
 145 150 155 160

Gln Asn Gly Val Leu Asn Ser Trp Thr Asp Gln Asp Ser Lys Asp Ser
 165 170 175
 Thr Tyr Ser Met Ser Ser Thr Leu Thr Leu Thr Lys Asp Glu Tyr Glu
 180 185 190
 Arg His Asn Ser Tyr Thr Cys Glu Ala Thr His Lys Thr Ser Thr Ser
 195 200 205
 Pro Ile Val Lys Ser Phe Asn Arg Asn Glu Cys Ala Ala Ala Leu Asp
 210 215 220
 Ile Ile Lys Glu Ile Asn Met Lys Tyr Leu Leu Pro Thr Ala Ala Ala
 225 230 235 240
 Gly Leu Leu Leu Leu Ala Ala Gln Pro Ala Met Ala Leu Glu Val Gln
 245 250 255
 Leu Gln Gln Ser Gly Ala Glu Leu Val Arg Pro Gly Ala Ser Val Thr
 260 265 270
 Leu Ser Cys Lys Ala Ser Asp Tyr Thr Phe Thr Asp Tyr Glu Met His
 275 280 285
 Trp Val Lys Gln Thr Pro Val His Gly Leu Glu Trp Ile Gly Gly Ile
 290 295 300
 Asp Pro Glu Thr Gly Gly Thr Val Tyr Asn Gln Lys Leu Lys Gly Lys
 305 310 315 320
 Ala Thr Leu Thr Ala Asp Lys Ala Ser Ser Thr Ala Tyr Met Glu Leu
 325 330 335
 Arg Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys Thr Ala Gly
 340 345 350
 Val Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ala Ala Lys Thr
 355 360 365
 Thr Ala Pro Ser Val Tyr Pro Leu Ala Pro Val Cys Gly Asp Thr Thr
 370 375 380
 Gly Ser Ser Met Thr Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu
 385 390 395 400
 Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His

405 410 415
 Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser
 420 425 430
 Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys
 435 440 445
 Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys Lys Val Glu
 450 455 460
 Pro Lys Ser Cys Asp Lys Thr Ser
 465 470

<210> 13
 <211> 108
 <212> PRT
 <213> murine

<400> 13

Asp Ile Gln Met Thr Gln Thr Thr Ser Ser Leu Ser Ala Ser Leu Gly
 1 5 10 15
 Asp Arg Val Thr Ile Ser Cys Arg Thr Ser Gln Asp Ile Ser Asn Tyr
 20 25 30
 Leu Asn Trp Tyr Gln Gln Lys Pro Asp Gly Thr Val Lys Val Leu Ile
 35 40 45
 Tyr Tyr Thr Ser Arg Leu His Ser Gly Val Pro Ser Arg Phe Ser Gly
 50 55 60
 Ser Gly Ser Gly Thr Asp Tyr Ser Leu Thr Ile Asn Asn Leu Glu Gln
 65 70 75 80
 Glu Asp Ile Ala Thr Tyr Phe Cys Gln Gln Gly Asn Thr Leu Pro Phe
 85 90 95
 Thr Phe Gly Ser Gly Thr Lys Leu Glu Ile Lys Arg
 100 105

<210> 14
 <211> 113
 <212> PRT
 <213> murine

<400> 14

Asp Ile Val Met Thr Gln Ala Glu Leu Ser Ser Pro Val Thr Ser Gly

1	5	10	15
Glu Ser Val	Ser Ile Ser Cys Arg	Ser Ser Lys Ser Leu	Leu Tyr Lys
	20	25	30
Asp Gly Lys	Thr Tyr Leu Asn Trp Tyr	Leu Gln Arg Pro	Gly Gln Ser
	35	40	45
Pro Gln Leu	Leu Ile Tyr Phe Met Ser Thr	Arg Ala Pro Gly	Val Ser
	50	55	60
Asp Arg Phe	Ser Gly Ile Gly Ser Gly Thr	Asp Phe Thr Leu	Glu Ile
	65	70	75
Ser Arg Val	Lys Ala Glu Asp Val Gly	Val Tyr Tyr Cys	Gln Gln Leu
	85	90	95
Val Glu Tyr	Pro Leu Thr Phe Gly Ala Gly	Thr Lys Leu Glu	Leu Lys
	100	105	110

Arg

<210> 15
 <211> 114
 <212> PRT
 <213> murine

<400> 15

Asp Ile Val	Met Thr Gln Ser Pro Ser	Ser Leu Ala Val Ser	Val Gly
1	5	10	15
Glu Lys Val	Thr Met Ser Cys Lys	Ser Ser Gln Ser Leu	Leu Tyr Ser
	20	25	30
Ser Asn Gln	Lys Asn Tyr Leu Ala Trp Tyr	Gln Gln Lys Pro	Gly Gln
	35	40	45
Ser Pro Lys	Leu Leu Ile Tyr Trp Ala Ser Thr	Arg Glu Ser Gly	Val
	50	55	60
Pro Asp Arg	Phe Thr Gly Ser Gly Ser Gly	Thr Asp Phe Thr	Leu Thr
	65	70	75
Ile Ser Ser	Val Lys Ala Glu Asp Leu Ala	Val Tyr Tyr Cys	Gln Gln
	85	90	95

Tyr Tyr Ser Tyr Pro Leu Thr Phe Gly Ala Gly Thr Lys Leu Glu Leu
100 105 110

Lys Arg

<210> 16
<211> 114
<212> PRT
<213> murine

<400> 16

Asp Ile Val Met Ser Gln Ser Pro Ser Ser Leu Ala Val Ser Val Gly
1 5 10 15

Glu Lys Val Thr Met Ser Cys Lys Ser Ser Gln Ser Leu Leu Tyr Ser
20 25 30

Ser Asn Gln Lys Asn Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln
35 40 45

Ser Pro Lys Leu Leu Ile Tyr Trp Ala Ser Ala Arg Gly Ser Gly Val
50 55 60

Pro Asp Arg Phe Thr Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr
65 70 75 80

Ile Ser Ser Val Lys Ala Glu Asp Leu Ala Val Tyr Tyr Cys Gln Gln
85 90 95

Tyr Tyr Ser Tyr Pro Leu Thr Ile Gly Ala Gly Thr Lys Leu Glu Leu
100 105 110

Lys Arg

<210> 17
<211> 113
<212> PRT
<213> murine

<400> 17

Asp Val Val Met Thr Gln Thr Pro Leu Ser Leu Pro Val Ser Leu Gly
1 5 10 15

Asp Gln Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Ile Val His Ser
20 25 30

Asn Gly Asn Thr Tyr Leu Glu Trp Tyr Leu Gln Lys Pro Gly Gln Ser
 35 40 45

Pro Lys Leu Leu Ile Tyr Lys Val Ser Asn Arg Phe Ser Gly Val Pro
 50 55 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
 65 70 75 80

Ser Arg Val Glu Ala Glu Asp Leu Gly Val Tyr Tyr Cys Phe Gln Gly
 85 90 95

Ser His Val Pro Leu Thr Phe Gly Ala Gly Thr Lys Leu Glu Leu Lys
 100 105 110

Arg

<210> 18
 <211> 113
 <212> PRT
 <213> murine

<400> 18

Leu Glu Val Gln Leu Gln Gln Ser Gly Ala Glu Leu Val Arg Pro Gly
 1 5 10 15

Ala Ser Val Thr Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asp
 20 25 30

Tyr Glu Met His Trp Val Lys Gln Thr Pro Val His Gly Leu Glu Trp
 35 40 45

Ile Gly Gly Ile Asp Pro Glu Ile Gly Gly Thr Val Tyr Asn Gln Lys
 50 55 60

Phe Lys Gly Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Gly Thr Ala
 65 70 75 80

Tyr Met Glu Leu Arg Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr
 85 90 95

Cys Thr Ser Phe Ala Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser
 100 105 110

Ala

<210> 19
 <211> 113
 <212> PRT
 <213> murine

<400> 19

Leu Glu Val Gln Leu Gln Gln Ser Gly Ala Glu Leu Val Arg Pro Gly
 1 5 10 15

Ala Ser Val Thr Leu Ser Cys Lys Ala Ser Asp Tyr Thr Phe Thr Asp
 20 25 30

Tyr Glu Met His Trp Val Lys Gln Thr Pro Val His Gly Leu Glu Trp
 35 40 45

Ile Gly Gly Ile Asp Pro Glu Thr Gly Gly Thr Val Tyr Asn Gln Lys
 50 55 60

Leu Lys Gly Lys Ala Thr Leu Thr Ala Asp Lys Ala Ser Ser Thr Ala
 65 70 75 80

Tyr Met Glu Leu Arg Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr
 85 90 95

Cys Thr Ala Gly Val Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser
 100 105 110

Ala

<210> 20
 <211> 113
 <212> PRT
 <213> murine

<400> 20

Leu Glu Val Gln Leu Gln Gln Ser Gly Ala Glu Leu Val Arg Pro Gly
 1 5 10 15

Ala Ser Val Thr Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asp
 20 25 30

Tyr Glu Val His Trp Val Lys Gln Thr Pro Val Gln Gly Leu Asp Trp
 35 40 45

Ile Gly Gly Ile Asp Pro Glu Ser Gly Gly Thr Ala Tyr Asn Gln Lys
 50 55 60

Phe Lys Gly Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Arg Thr Ala
65 70 75 80

Tyr Met Glu Leu Arg Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr
85 90 95

Cys Thr Ala Gly Ala Asp Trp Gly Gln Gly Thr Leu Val Thr Val Phe
100 105 110

Ala

<210> 21
<211> 116
<212> PRT
<213> murine

<400> 21

Leu Glu Val Gln Leu Lys Gln Ser Gly Ala Glu Leu Val Lys Pro Gly
1 5 10 15

Ala Ser Val Lys Leu Ser Cys Thr Ala Ser Gly Phe Asn Ile Lys Asp
20 25 30

Thr Tyr Ile Asn Trp Val Lys Gln Arg Pro Glu Gln Gly Leu Glu Trp
35 40 45

Ile Gly Arg Ile Asp Pro Ala Asn Asn Asn Thr Asn Tyr Asp Pro Lys
50 55 60

Phe Gln Gly Lys Ala Thr Ile Thr Ala Asp Thr Pro Ser Asn Thr Ala
65 70 75 80

Tyr Leu Gln Leu Ser Ser Leu Thr Ser Glu Asp Thr Asp Val Tyr Tyr
85 90 95

Cys Val Ser Gly Gly Tyr Phe Asp Tyr Trp Gly Gln Gly Thr Thr Leu
100 105 110

Thr Val Ser Ser
115

<210> 22
<211> 116
<212> PRT
<213> murine

<400> 22

Leu Glu Val Gln Leu Gln Gln Ser Gly Ala Glu Phe Val Arg Pro Gly
 1 5 10 15

Ala Ser Val Lys Leu Ser Cys Thr Gly Ser Gly Phe Asn Ile Lys Asp
 20 25 30

Thr Tyr Met Asn Trp Val Ile Gln Arg Pro Glu Gln Gly Leu Glu Trp
 35 40 45

Ile Gly Met Ile Asp Pro Ala Asn Gly Asn Thr Gln Tyr Asp Pro Lys
 50 55 60

Phe Gln Gly Lys Ala Thr Ile Thr Ala Asp Thr Ser Ser Asn Thr Ala
 65 70 75 80

Tyr Leu Gln Leu Ser Ser Leu Thr Ser Glu Asp Thr Ala Val Tyr Tyr
 85 90 95

Cys Thr Ser Gly Gly Tyr Phe Asp Tyr Trp Gly Gln Gly Thr Thr Leu
 100 105 110

Thr Val Ser Ser
 115

<210> 23
 <211> 114
 <212> PRT
 <213> murine

<400> 23

Leu Glu Val Lys Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly
 1 5 10 15

Gly Ser Leu Lys Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Asp
 20 25 30

Tyr Ala Met Ser Trp Val Arg Gln Thr Pro Glu Lys Arg Leu Glu Trp
 35 40 45

Val Ala Ser Ile Ser Ser Gly Gly Thr Thr Tyr Tyr Leu Asp Ser Val
 50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Arg Asn Ile Leu Tyr
 65 70 75 80

Leu Gln Met Ser Ser Leu Arg Ser Glu Asp Thr Ala Met Tyr Tyr Cys
 85 90 95

Val Arg Ser Glu Thr Asn Tyr Trp Gly Gln Gly Thr Thr Leu Thr Val
 100 105 110

Ser Ser

<210> 24
 <211> 120
 <212> PRT
 <213> murine

<400> 24

Leu Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Lys
 1 5 10 15

Gly Ser Leu Lys Leu Ser Cys Ala Ala Ser Gly Phe Asn Phe Asn Thr
 20 25 30

Tyr Ala Met Asn Trp Val Arg Gln Ser Pro Gly Lys Gly Leu Glu Trp
 35 40 45

Val Ala Arg Ile Arg Thr Lys Ser Asn Asn Tyr Ala Thr Tyr Tyr Ala
 50 55 60

Asp Ser Val Lys Asp Arg Phe Ser Val Ser Arg Asp Asp Ser Gln Ser
 65 70 75 80

Met Leu Tyr Leu Gln Met Asn Asn Leu Lys Thr Glu Asp Thr Ala Met
 85 90 95

Tyr Tyr Cys Val Arg His Glu Gly Asp Trp Phe Ala Tyr Trp Gly Gln
 100 105 110

Gly Thr Leu Val Thr Val Ser Glu
 115 120

<210> 25
 <211> 120
 <212> PRT
 <213> murine

<400> 25

Leu Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Lys
 1 5 10 15

Gly Ser Leu Lys Leu Ser Cys Ala Ala Ser Gly Phe Asn Phe Asn Thr
 20 25 30

Tyr Ala Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp
35 40 45

Val Ala Arg Ile Arg Ser Lys Ser Asn Asn Tyr Ala Thr Tyr Tyr Ala
50 55 60

Asp Ser Val Lys Asp Arg Phe Thr Ile Ser Arg Asp Asp Ser Gln Ser
65 70 75 80

Met Leu Tyr Leu Gln Met Asn Asn Leu Lys Thr Glu Asp Thr Ala Met
85 90 95

Tyr Tyr Cys Val Arg His Glu Gly Asp Trp Phe Ala Tyr Trp Gly Gln
100 105 110

Gly Thr Leu Val Thr Val Ser Ala
115 120

<210> 26
<211> 120
<212> PRT
<213> murine

<400> 26

Leu Glu Val Lys Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Lys
1 5 10 15

Gly Ser Leu Lys Leu Ser Cys Ala Ala Ser Gly Phe Asn Phe Asn Thr
20 25 30

Tyr Ala Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp
35 40 45

Val Ala Arg Ile Arg Ser Lys Ser Asn Asn Tyr Ala Thr Tyr Tyr Ala
50 55 60

Asp Ser Val Lys Asp Arg Phe Thr Ile Ser Arg Asp Asp Ser Gln Ser
65 70 75 80

Met Leu Tyr Leu Gln Met Asn Asn Leu Lys Thr Glu Asp Thr Ala Met
85 90 95

Tyr Tyr Cys Val Arg His Glu Gly Asp Trp Phe Ala Tyr Trp Gly Gln
100 105 110

Gly Thr Leu Val Thr Val Ser Ala

115

120

<210> 27
 <211> 120
 <212> PRT
 <213> murine

<400> 27

Leu Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Lys
 1 5 10 15

Gly Ser Leu Lys Leu Ser Cys Ala Ala Ser Gly Phe Asn Phe Asn Thr
 20 25 30

Tyr Ala Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp
 35 40 45

Val Ala Arg Ile Arg Ser Lys Ser Asn Asn Tyr Ala Thr Tyr Tyr Ala
 50 55 60

Asp Ser Val Lys Asp Arg Phe Thr Ile Ser Arg Asp Asp Ser Gln Ser
 65 70 75 80

Met Leu Tyr Leu Gln Met Asn Asn Leu Lys Thr Glu Asp Thr Ala Met
 85 90 95

Tyr Tyr Cys Val Arg His Glu Gly Asn Trp Phe Ala Tyr Trp Gly Gln
 100 105 110

Gly Thr Leu Val Thr Val Ser Ala
 115 120

<210> 28
 <211> 116
 <212> PRT
 <213> murine

<400> 28

Leu Glu Val Gln Leu Gln Gln Ser Gly Ala Glu Leu Ala Lys Pro Gly
 1 5 10 15

Ala Ser Val Lys Met Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn
 20 25 30

Ser Trp Ile His Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp
 35 40 45

Ile Gly Tyr Ile His Pro Gly Pro Gly Tyr Thr Glu Tyr Asn Gln Asn

50		55		60
Phe Lys Asp Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Ser Thr Ala				
65		70	75	80
Tyr Ile Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr				
	85		90	95
Cys Ile Arg Gly Gly Asp Trp Gly Tyr Trp Gly Gln Gly Thr Ser Val				
	100		105	110
Thr Val Ser Ser				
	115			
<210> 29				
<211> 116				
<212> PRT				
<213> murine				
<400> 29				
Leu Glu Val Gln Leu Lys Gln Ser Gly Ala Glu Leu Val Lys Pro Gly				
1	5		10	15
Ala Ser Val Lys Leu Ser Cys Thr Ala Ser Gly Phe Asn Ile Lys Asp				
	20		25	30
Thr Tyr Met Asn Trp Val Lys Gln Arg Pro Glu Gln Gly Leu Glu Trp				
	35		40	45
Ile Gly Gly Ile Asp Pro Ala Asn Asp Asn Thr Glu Tyr Val Pro Lys				
	50		55	60
Phe Gln Gly Arg Ala Thr Ile Thr Ala Asp Thr Ser Ser Asn Thr Ala				
65		70	75	80
Tyr Leu Gln Leu Arg Ser Leu Thr Ser Asp Asp Thr Ala Val Tyr Tyr				
	85		90	95
Cys Val Thr Gly Gly Tyr Phe Asp Tyr Trp Gly Gln Gly Thr Thr Leu				
	100		105	110
Thr Val Ser Ser				
	115			
<210> 30				
<211> 116				
<212> PRT				
<213> murine				

<400> 30

Leu Glu Val Gln Leu Gln Gln Ser Gly Ala Glu Leu Val Lys Pro Gly
1 5 10 15

Ala Ser Val Lys Leu Ser Cys Thr Ala Ser Gly Phe Asn Ile Lys Asp
20 25 30

Thr Tyr Met Asn Trp Val Lys Gln Arg Pro Glu Gln Gly Leu Glu Trp
35 40 45

Ile Gly Gly Ile Asp Pro Ala Asn Asp Asn Thr Glu Tyr Val Pro Lys
50 55 60

Phe Gln Gly Arg Ala Thr Ile Thr Ala Asp Thr Ser Ser Asn Thr Ala
65 70 75 80

Tyr Leu Gln Leu Arg Ser Leu Thr Ser Asp Asp Thr Ala Val Tyr Tyr
85 90 95

Cys Val Thr Gly Gly Tyr Phe Asp Tyr Trp Gly Gln Gly Thr Thr Leu
100 105 110

Thr Val Ser Ser
115

<210> 31

<211> 113

<212> PRT

<213> murine

<400> 31

Leu Glu Val Gln Leu Gln Gln Ser Gly Ala Glu Leu Val Arg Pro Gly
1 5 10 15

Ala Ser Val Thr Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asp
20 25 30

Tyr Glu Met His Trp Val Lys Gln Thr Pro Val His Gly Leu Glu Trp
35 40 45

Ile Gly Gly Ile Asp Pro Glu Thr Gly Gly Thr Val Tyr Asn Gln Lys
50 55 60

Phe Lys Gly Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Ser Thr Ala
65 70 75 80

Tyr Met Glu Leu Arg Ser Gln Thr Ser Glu Asp Ser Ala Val Tyr Tyr
85 90 95

Cys Thr Arg Trp Asp Tyr Trp Gly Gln Gly Thr Thr Leu Thr Val Ser
100 105 110

Ser

<210> 32
<211> 120
<212> PRT
<213> murine

<400> 32

Leu Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Lys
1 5 10 15

Gly Ser Leu Lys Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Asn Thr
20 25 30

Tyr Ala Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp
35 40 45

Val Ala Arg Ile Arg Thr Lys Ser Asn Asn Tyr Ala Thr Tyr Tyr Ala
50 55 60

Asp Ser Val Lys Asp Arg Phe Thr Ile Ser Arg Asp Asp Ser Gln Ser
65 70 75 80

Met Leu Tyr Leu Gln Met Asn Asn Leu Lys Thr Glu Asp Thr Ala Thr
85 90 95

Tyr Tyr Cys Val Arg Gln Gly Glu Asn Arg Phe Ala Tyr Trp Gly Gln
100 105 110

Gly Thr Leu Val Thr Val Ser Ala
115 120

<210> 33
<211> 113
<212> PRT
<213> murine

<400> 33

Leu Glu Val Gln Leu Gln Gln Ser Gly Ala Glu Leu Val Arg Pro Gly
1 5 10 15

Ala Ser Val Thr Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asp
 20 25 30

Tyr Glu Met His Trp Val Lys Gln Thr His Val His Gly Leu Glu Trp
 35 40 45

Ile Gly Gly Ile Asp Pro Glu Thr Gly Gly Thr Val Tyr Asn Gln Lys
 50 55 60

Phe Lys Gly Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Ser Thr Ala
 65 70 75 80

Tyr Met Glu Leu Arg Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr
 85 90 95

Cys Thr Ser Ser Leu Pro Trp Gly Gln Gly Thr Leu Val Thr Val Ser
 100 105 110

Ala

<210> 34
 <211> 6
 <212> PRT
 <213> murine

<400> 34

Gln Asp Ile Ser Asn Tyr
 1 5

<210> 35
 <211> 11
 <212> PRT
 <213> murine

<400> 35

Lys Ser Leu Leu Tyr Lys Asp Gly Lys Thr Tyr
 1 5 10

<210> 36
 <211> 12
 <212> PRT
 <213> murine

<400> 36

Gln Ser Leu Leu Tyr Ser Ser Asn Gln Lys Asn Tyr
 1 5 10

<210> 37

<211> 11
<212> PRT
<213> murine

<400> 37

Gln Ser Ile Val His Ser Asn Gly Asn Thr Tyr
1 5 10

<210> 38
<211> 10
<212> PRT
<213> murine

<400> 38

Gly Tyr Thr Phe Thr Asp Tyr Glu Met His
1 5 10

<210> 39
<211> 10
<212> PRT
<213> murine

<400> 39

Asp Tyr Thr Phe Thr Asp Tyr Glu Met His
1 5 10

<210> 40
<211> 10
<212> PRT
<213> murine

<400> 40

Gly Tyr Thr Phe Thr Asp Tyr Glu Val His
1 5 10

<210> 41
<211> 10
<212> PRT
<213> murine

<400> 41

Gly Phe Asn Ile Lys Asp Thr Tyr Ile Asn
1 5 10

<210> 42
<211> 10
<212> PRT
<213> murine

<400> 42

Gly Phe Thr Phe Ser Asp Tyr Ala Met Ser

1 5 10

<210> 43
 <211> 10
 <212> PRT
 <213> murine

<400> 43

Gly Phe Asn Phe Asn Thr Tyr Ala Met Asn
 1 5 10

<210> 44
 <211> 10
 <212> PRT
 <213> artificial sequence

<220>
 <223> primer

<400> 44

Gly Tyr Thr Phe Thr Asn Ser Trp Ile His
 1 5 10

<210> 45
 <211> 10
 <212> PRT
 <213> murine

<400> 45

Gly Phe Asn Ile Lys Asp Thr Tyr Met Asn
 1 5 10

<210> 46
 <211> 10
 <212> PRT
 <213> murine

<400> 46

Gly Tyr Thr Phe Thr Asp Tyr Glu Met His
 1 5 10

<210> 47
 <211> 10
 <212> PRT
 <213> murine

<400> 47

Gly Phe Thr Phe Asn Thr Tyr Ala Met Asn
 1 5 10

<210> 48

<211> 10
<212> PRT
<213> murine

<400> 48

Gly Tyr Thr Phe Thr Asp Tyr Glu Met His
1 5 10

<210> 49
<211> 3
<212> PRT
<213> murine

<400> 49

Tyr Thr Ser
1

<210> 50
<211> 3
<212> PRT
<213> murine

<400> 50

Phe Met Ser
1

<210> 51
<211> 3
<212> PRT
<213> murine

<400> 51

Trp Ala Ser
1

<210> 52
<211> 3
<212> PRT
<213> murine

<400> 52

Lys Val Ser
1

<210> 53
<211> 17
<212> PRT
<213> murine

<400> 53

Gly Ile Asp Pro Glu Ile Gly Gly Thr Val Tyr Asn Gln Lys Phe Lys

1 5 10 15

Gly

<210> 54
<211> 17
<212> PRT
<213> murine

<400> 54

Gly Ile Asp Pro Glu Thr Gly Gly Thr Val Tyr Asn Gln Lys Leu Lys
1 5 10 15

Gly

<210> 55
<211> 17
<212> PRT
<213> murine

<400> 55

Gly Ile Asp Pro Glu Ser Gly Gly Thr Ala Tyr Asn Gln Lys Phe Lys
1 5 10 15

Gly

<210> 56
<211> 17
<212> PRT
<213> murine

<400> 56

Arg Ile Asp Pro Ala Asn Asn Asn Thr Asn Tyr Asp Pro Lys Phe Gln
1 5 10 15

Gly

<210> 57
<211> 17
<212> PRT
<213> murine

<400> 57

Met Ile Asp Pro Ala Asn Gly Asn Thr Gln Tyr Asp Pro Lys Phe Gln
1 5 10 15

Gly

<210> 58
<211> 16
<212> PRT
<213> murine

<400> 58

Ser Ile Ser Ser Gly Gly Thr Thr Tyr Tyr Leu Asp Ser Val Lys Gly
1 5 10 15

<210> 59
<211> 19
<212> PRT
<213> murine

<400> 59

Arg Ile Arg Thr Lys Ser Asn Asn Tyr Ala Thr Tyr Tyr Ala Asp Ser
1 5 10 15

Val Lys Asp

<210> 60
<211> 19
<212> PRT
<213> murine

<400> 60

Arg Ile Arg Ser Lys Ser Asn Asn Tyr Ala Thr Tyr Tyr Ala Asp Ser
1 5 10 15

Val Lys Asp

<210> 61
<211> 17
<212> PRT
<213> murine

<400> 61

Tyr Ile His Pro Gly Pro Gly Tyr Thr Glu Tyr Asn Gln Asn Phe Lys
1 5 10 15

Asp

<210> 62

<211> 17
<212> PRT
<213> murine

<400> 62

Gly Ile Asp Pro Ala Asn Asp Asn Thr Glu Tyr Val Pro Lys Phe Gln
1 5 10 15

Gly

<210> 63
<211> 17
<212> PRT
<213> murine

<400> 63

Gly Ile Asp Pro Glu Thr Gly Gly Thr Val Tyr Asn Gln Lys Phe Lys
1 5 10 15

Gly

<210> 64
<211> 19
<212> PRT
<213> murine

<400> 64

Arg Ile Arg Thr Lys Ser Asn Asn Tyr Ala Thr Tyr Tyr Ala Asp Ser
1 5 10 15

Val Lys Asp

<210> 65
<211> 17
<212> PRT
<213> murine

<400> 65

Gly Ile Asp Pro Glu Thr Gly Gly Thr Val Tyr Asn Gln Lys Phe Lys
1 5 10 15

Gly

<210> 66
<211> 13
<212> PRT

<213> murine

<400> 66

Gln Gln Gly Asn Thr Leu Pro Phe Thr Phe Gly Ser Gly
1 5 10

<210> 67

<211> 13

<212> PRT

<213> murine

<400> 67

Gln Gln Leu Val Glu Tyr Pro Leu Thr Phe Gly Ala Gly
1 5 10

<210> 68

<211> 13

<212> PRT

<213> murine

<400> 68

Gln Gln Tyr Tyr Ser Tyr Pro Leu Thr Phe Gly Ala Gly
1 5 10

<210> 69

<211> 13

<212> PRT

<213> murine

<400> 69

Gln Gln Tyr Tyr Ser Tyr Pro Leu Thr Ile Gly Ala Gly
1 5 10

<210> 70

<211> 13

<212> PRT

<213> murine

<400> 70

Phe Gln Gly Ser His Val Pro Leu Thr Phe Gly Ala Gly
1 5 10

<210> 71

<211> 3

<212> PRT

<213> murine

<400> 71

Phe Ala Tyr
1

<210> 72
<211> 3
<212> PRT
<213> murine

<400> 72

Gly Val Tyr
1

<210> 73
<211> 3
<212> PRT
<213> murine

<400> 73

Gly Ala Asp
1

<210> 74
<211> 6
<212> PRT
<213> murine

<400> 74

Gly Gly Tyr Phe Asp Tyr
1 5

<210> 75
<211> 5
<212> PRT
<213> murine

<400> 75

Ser Glu Thr Asn Tyr
1 5

<210> 76
<211> 8
<212> PRT
<213> murine

<400> 76

His Glu Gly Asp Trp Phe Ala Tyr
1 5

<210> 77
<211> 8
<212> PRT
<213> murine

<400> 77

His Glu Gly Asn Trp Phe Ala Tyr
1 5

<210> 78
<211> 6
<212> PRT
<213> murine

<400> 78

Gly Gly Asp Trp Gly Tyr
1 5

<210> 79
<211> 6
<212> PRT
<213> murine

<400> 79

Gly Gly Tyr Phe Asp Tyr
1 5

<210> 80
<211> 3
<212> PRT
<213> murine

<400> 80

Trp Asp Tyr
1

<210> 81
<211> 8
<212> PRT
<213> murine

<400> 81

Gln Gly Glu Asn Arg Phe Ala Tyr
1 5

<210> 82
<211> 3
<212> PRT
<213> murine

<400> 82

Ser Leu Pro
1

<210> 83
<211> 663

<212> DNA
 <213> human

<400> 83
 agcccggcgc agcatcctga ggcgcgcctct gccgaggcga gcggacatgc aggctccccg 60
 cgcagcccta gtcttcgccc tggatgatgc gtcggttccc gtcggccggg gtaattatga 120
 ggaattagaa aactcaggag atacaactgt ggaatctgaa agaccaaata aagtgactat 180
 tccaagcaca tttgctgcag tgaccatcaa agaaacatta aatgcaaata taaattctac 240
 caactttgct ccggatgaaa atcagttaga gtttatactg atggtgttaa tccattgat 300
 tttattggtc ctcttacttt tatccgtggt attccttgca acatactata aaagaaaaag 360
 aactaacaag aaccttctag ccaaggatct cagagtgttt tacagacata tgaactggga 420
 agtgaaaacg tgaaagtccc tatttttgag gaagatacac cctctgttat ggaaattgaa 480
 atggaagagc ttgataaatg gatgaacagc atgaatagaa atgccgactt tgaatgttta 540
 cctaccttga aggaagagaa ggaatcaaat cacaacccaa gtgacagtga atcctaaacc 600
 tgaatggcgc tcatgttttc caagagaagc agcccctgag ggagtctgct gaggctgcca 660
 aca 663

<210> 84
 <211> 182
 <212> PRT
 <213> human

<400> 84
 Met Gln Ala Pro Arg Ala Ala Leu Val Phe Ala Leu Val Ile Ala Leu
 1 5 10 15
 Val Pro Val Gly Arg Gly Asn Tyr Glu Glu Leu Glu Asn Ser Gly Asp
 20 25 30
 Thr Thr Val Glu Ser Glu Arg Pro Asn Lys Val Thr Ile Pro Ser Thr
 35 40 45
 Phe Ala Ala Val Thr Ile Lys Thr Leu Asn Ala Asn Ile Asn Ser Thr
 50 55 60
 Asn Phe Ala Pro Asp Glu Asn Gln Leu Glu Phe Ile Leu Met Val Leu
 65 70 75 80
 Ile Pro Leu Ile Leu Leu Val Leu Leu Leu Leu Ser Val Val Phe Leu
 85 90 95
 Ala Thr Tyr Tyr Lys Arg Lys Arg Thr Lys Gln Glu Pro Ser Ser Gln
 100 105 110

Gly Ser Gln Ser Ala Leu Gln Thr Tyr Glu Leu Gly Ser Glu Asn Val
 115 120 125

Lys Val Pro Ile Phe Glu Glu Asp Thr Pro Ser Val Met Glu Ile Glu
 130 135 140

Met Glu Glu Leu Asp Lys Trp Met Asn Ser Met Asn Arg Asn Ala Asp
 145 150 155 160

Phe Glu Cys Leu Pro Thr Leu Lys Glu Glu Lys Glu Ser Asn His Asn
 165 170 175

Pro Ser Asp Ser Glu Ser
 180

<210> 85
 <211> 181
 <212> PRT
 <213> artificial sequence

<220>
 <223> Majority Sequence of human FLJ32028 and similar, murine and rat proteins

<220>
 <221> MISC_FEATURE
 <222> (3)..(3)
 <223> Xaa = any amino acid

<220>
 <221> MISC_FEATURE
 <222> (5)..(5)
 <223> Xaa = any amino acid

<220>
 <221> MISC_FEATURE
 <222> (10)..(10)
 <223> Xaa = any amino acid

<220>
 <221> MISC_FEATURE
 <222> (13)..(13)
 <223> Xaa = any amino acid

<220>
 <221> MISC_FEATURE
 <222> (14)..(14)
 <223> Xaa = any amino acid

<220>
 <221> MISC_FEATURE
 <222> (16)..(16)
 <223> Xaa = any amino acid

```

<220>
<221> MISC_FEATURE
<222> (17)..(17)
<223> Xaa = any amino acid

<220>
<221> MISC_FEATURE
<222> (17)..(17)
<223> Xaa = any amino acid

<220>
<221> MISC_FEATURE
<222> (19)..(19)
<223> Xaa = any amino acid

<220>
<221> MISC_FEATURE
<222> (21)..(21)
<223> Xaa = any amino acid

<220>
<221> MISC_FEATURE
<222> (32)..(32)
<223> Xaa = any amino acid

<220>
<221> MISC_FEATURE
<222> (39)..(39)
<223> Xaa = any amino acid

<220>
<221> MISC_FEATURE
<222> (40)..(40)
<223> Xaa = any amino acid

<220>
<221> MISC_FEATURE
<222> (42)..(42)
<223> Xaa = any amino acid

<220>
<221> MISC_FEATURE
<222> (61)..(61)
<223> Xaa = any amino acid

<220>
<221> MISC_FEATURE
<222> (66)..(68)
<223> Xaa = any amino acid

<220>
<221> MISC_FEATURE
<222> (92)..(92)
<223> Xaa = any amino acid

<220>
<221> MISC_FEATURE
<222> (120)..(120)
<223> Xaa = any amino acid

<220>
<221> MISC_FEATURE

```

<222> (172)..(172)
 <223> Xaa = any amino acid

<220>
 <221> MISC_FEATURE
 <222> (174)..(174)
 <223> Xaa = any amino acid

<220>
 <221> MISC_FEATURE
 <222> (175)..(175)
 <223> Xaa = any amino acid

<220>
 <221> MISC_FEATURE
 <222> (175)..(175)
 <223> Xaa = any amino acid

<220>
 <221> MISC_FEATURE
 <222> (175)..(175)
 <223> Xaa = any amino acid

<400> 85

Met Thr Xaa Pro Xaa Ala Ala Leu Val Xaa Ala Leu Xaa Xaa Ala Xaa
 1 5 10 15

Xaa Gln Xaa Ser Xaa Gly Asn Asp Glu Glu Ser Glu Tyr Ser Gly Xaa
 20 25 30

Ser Thr Thr Glu Glu Glu Xaa Xaa Glu Xaa Glu Thr Thr Arg Ser Ala
 35 40 45

Leu Ala Thr Val Thr Thr Glu Ala Leu Ala Glu Asn Xaa Asn Ser Thr
 50 55 60

His Xaa Xaa Xaa Thr Ser Asn Gln Val Glu Phe Ile Leu Met Val Ala
 65 70 75 80

Ile Pro Leu Ala Ala Leu Leu Ile Leu Leu Phe Xaa Val Leu Ile Ala
 85 90 95

Thr Tyr Phe Lys Ser Lys Arg Pro Lys Gln Glu Pro Ser Ser Gln Gly
 100 105 110

Ser Gln Ser Ala Leu Gln Thr Xaa Glu Leu Gly Gly Glu Thr Leu Lys
 115 120 125

Val Pro Ile Phe Glu Glu Asp Thr Pro Ser Val Met Glu Ile Glu Met
 130 135 140

Glu Glu Leu Asp Lys Trp Met Asn Ser Met Asn Arg Asn Ala Asp Phe

145 150 155 160
 Glu Cys Leu Pro Thr Leu Lys Glu Glu Lys Glu Xaa Asn Xaa Xaa Pro
 165 170 175

 Ser Asp Ser Glu Ser
 180

 <210> 86
 <211> 120
 <212> PRT
 <213> murine

 <400> 86

 Leu Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Lys
 1 5 10 15

 Gly Ser Leu Lys Leu Ser Cys Ala Ala Ser Gly Phe Asn Phe Asn Thr
 20 25 30

 Tyr Ala Met Asn Trp Val Arg Gln Ser Pro Gly Lys Gly Leu Glu Trp
 35 40 45

 Val Ala Arg Ile Arg Thr Lys Ser Asn Asn Tyr Ala Thr Tyr Tyr Ala
 50 55 60

 Asp Ser Val Lys Asp Arg Phe Ser Val Ser Arg Asp Asp Ser Gln Ser
 65 70 75 80

 Met Leu Tyr Leu Gln Met Asn Asn Leu Lys Thr Glu Asp Thr Ala Met
 85 90 95

 Tyr Tyr Cys Val Arg His Glu Gly Asp Trp Phe Ala Tyr Trp Gly Gln
 100 105 110

 Gly Thr Leu Val Thr Val Ser Glu
 115 120